Bedford and Stapp attempt to give a Bell like argument which at no stage assumes counterfactual definitness, using Lewis's framework for counterfactuals. A problem in exposition, easily fixed, is that the paper refers to the material conditional when apparently it is the strict conditional which is intended. Of much greater concern is the counter argument to CBR: Crucial, here, as far as I can see is the author's claim, p. 10, that "...[the authors' present] derivation of the truth of statement (2.1) from Lewis's rules of saliency makes essential use of the no-faster than light influence assumption." The assumption gets mentioned, but I just don't see how it is actually playing any role in the argument.

The last comment is debatable. Another problem, however, seems to me clearly to undermine the main argument of the paper. The argument crucially turns on (2.2). It is east to provide both trivial and substantive models in which Lewis's rules for counterfactuals make (2.2) false (e.g., a model in which the step from (3.17) to (3.18) fails) So we must examine the authors' "verification" of (2.2). They write:

> "The general Lewis formalism must, in any application, be supplemented by specific rules that define the closeness of worlds. In our particular case these rules must be such as to entail the passage from (3.41) to (3.42), which is the result that comes out of the accurate analysis. This is precisely the content of (2.2). (p. 21)

But the passage from (3.41) to (3.41) is (an instance of) exactly the principle to b "verified". So, formally speaking, the argument for (2.2) begs the question.

The authors also give an informal gloss on their reasons for endorsing (2.2). Examination of these considerations does not in any way improve the case. On pp. 18-20 the authors summarize a prior formulation of the argument, from Stapp (1990), which does not appeal to counterfactuals and their analysis. The authors then write: "The accurate formulation of the [prior] argument yields (3.40) one half of which is not (3.41) but rather (3.42)..." Since the passage from (3.41) to (3.42) is (an instance of) exactly the principle (2.2) to be "verified", it is clear that these considerations do not lend any support for (2.2), and so for the conclusions of the prenset MS, over and above those presented in the prior paper.

The authors also write (bottom p. 20) that " [t]he occurrence of X1X2X3 is, however, rather ghostly...and no reference to the outcome of [X1X2X3] is ever made." This is simply false. While no explicit reference to the outcome of X1X2X3 occurs in (3.41), it does occur in the argument for

(3.41). This is one way of pin pointing the fallacy in dropping reference to X1X2X3 , i.e., in moving from (3.41) to (3.42)

While the old paper is not here in consideration, there is some point to examingin the older argument, as summarized in the new MS, pp. 18-20. For years. Dr. Stapp has written papers in which he gives Bell like arguments which he claims do not assume counterfactual definiteness at any stage. Refereeing such appers calls for the task of figuring out where the assumption of counterfactual definitneess has been smuggled in.

The authors begin with relations (3.32), using counterfactuals, which they summarize as (3.33), using the notation, "[A,a]", which we are told is supposed to mean, "a if A". But it is quite unclear how to understand the [,] notation. The statements of (3.32) have a conjunction on the left hand side and a counterfactual conditional on the right. If "[A,a]" and "[B,b]" are understood as on the left hand sides of (3.32), then (3.33) comes out as just silly, and clearly false. If understood as on the right hand sides, so that the "if" in "a if A" is understood as a counterfactual conditional, then (3.33) does not, as clarified represent (3.32). But (3.32) was the crutial no faster than light condition, which in turn seemed to avoid any counterfactual definitness assumption, in as much as the antecedents of (3.32) are expressed as factual statements. The only intelligible reading for (3.33) gives up this factual aspect of the conditionals of (3.32), and so gives up the aspect of the counterfactual analysis of the present MS which appeared to avoid an independent assumption of counterfactual definiteness.

To see this in more detail, consider the gloss which the authors give on pp. 19-20. Suppose I perform X1 "today" and get result x1 = 1. then, the authors want to suggest, it can't matter whether "tomorrow" (for some observer) it is X2X3 or Y2Y3 which is performed. But further consider that in fact the experiment will be completed in exactly one of these ways. To assume that there is a value for the outcome of X1 (whatever that value might be) which is the value which would have occurred if the other total experiment had been performed is just to assume counteractual definiteness, that is the existence of a value such that if, counter to fact, the other experiment had been performed , then that value is the value which would have occurred. Once a value is counterfactually assumed, the authors' considerations do support the conclusion that that value should be the same as the value which in fact occurred. But the assumption that there IS a definite value is assumed, entirely gratuitously.

The reason I think this fallacy might have slipped by

is that, under the circumstances so far described, the assumption of counterfactual definiteness seems harmless. And if the argument were taken no further, it is harmless. But not if statements of the form (3.33) are concatinated. The authors use arguments of the form:

(i) [A,a] = [B,b]
(ii) [B,b] = [C,c]
Therefore
(iii) [A,a] = [C,c].

But this argument is fallacious unless there is one value for the outcome of B, call it b, common to both (i) and (ii). In other words, the argument is valid only if interpreted with existential quantifiers preceding the whole: There are values a, b, and c such that..... And this is just the assumption of counterfactual definiteness.

I am confident that the same problem occurs repeatedly with the parameters m, n, and r on page 16, but I have not verifed this claim in detail. Engough as been said to establish that the present MS adds nothing to the older argument, which in turn clearly smuggles in assumptions of counterfactual definiteness.